IN THE CLAIMS

Please amend the claims as follows:

Claims 1-41 (Canceled).

Claim 42 (New): A tube bundle apparatus configured to efficiently effect thermal exchange, under high pressure and temperature conditions, between at least two fluids of which one has highly aggressive characteristics under process conditions, comprising:

a hollow body equipped with an external casing, or pressure-resistant body, configured to tolerate operating pressures and including a material subject to corrosion by contact with the highly aggressive fluid, and including openings for entrance and exit of the fluids, wherein inside of the hollow body there are at least two cavities separated from each other by a third sealed cavity with respect to the at least two cavities, situated between two septa or plates hinged onto the pressure-resistant body, the two cavities communicating with each other by a series of tubes, whose internal wall is put in contact with the highly aggressive fluid and includes a material selected from titanium, zirconium, or an alloy of one of these, that is highly resistant to corrosion, forming a tube bundle situated between the two septa or plates that passes through the third cavity,

wherein at least one of the two cavities is in contact with the highly aggressive fluid and is at least partly delimited by a three-layered wall comprising at least three metallic layers including:

an external layer configured to tolerate a predetermined pressure load, subject to corrosion by contact with the highly aggressive process fluid;

an intermediate layer made of stainless steel; and

an anticorrosive lining in contact with the highly corrosive fluid, including a material selected from titanium, zirconium, or an alloy of one of these.

Claim 43 (New): The apparatus according to claim 42, wherein the material forming the anticorrosive lining is selected from titanium and zirconium.

Claim 44 (New): The apparatus according to claim 42, positioned vertically, wherein the at least one of the two cavities bordered by the at least three metallic layers forms a lower collection chamber of the highly aggressive fluid.

Claim 45 (New): The apparatus according to claim 42, wherein the three-layered wall completely borders the cavity in contact with the highly aggressive fluid.

Claim 46 (New): The apparatus according to claim 42, wherein the intermediate layer has a thickness ranging from 3 to 25 mm and the anticorrosive lining has a thickness ranging from 0.5 to 10 mm.

Claim 47 (New): The apparatus according to claim 42, wherein the intermediate layer includes a stainless steel selected from AISI 316L steel, INOX steels, special austenitic-ferritic steels.

Claim 48 (New): The apparatus according to claim 42, wherein the anticorrosive lining is at least partially obtained by a welding deposit.

Claim 49 (New): The apparatus according to claim 42, wherein the anticorrosive lining is obtained by thermal spray technology.

Claim 50 (New): The apparatus according to claim 42, comprising weep-holes situated in the pressure-resistant body.

Claim 51 (New): The apparatus according to claim 42, wherein each tube in the tube bundle is a bimetallic tube comprising a stainless steel outer layer and an internal lining layer, in contact with the corrosive fluid, including a material selected from titanium, zirconium, or an alloy of one of them.

Claim 52 (New): The apparatus according to claim 51, wherein, in the bimetallic tube, a ratio between a thickness of the stainless steel outer layer and the internal lining layer ranges from 1 to 20.

Claim 53 (New): The apparatus according to the previous claim 52, wherein the outer layer has a thickness of from 2 to 15 mm, and the internal layer has a thickness of from 0.5 to 3 mm.

Claim 54 (New): The apparatus according to claim 51, wherein the intermediate layer includes a same material as the outer layer of the bimetallic tube, and the anticorrosive lining includes a same material as the internal lining layer of the bimetallic tube.

Claim 55 (New): The apparatus according to any of the previous claim 51, wherein the three-layered wall comprising the at least three metallic layers constitutes at least the plate delimiting the cavity in contact with the highly aggressive fluid.

Claim 56 (New): The apparatus according to the previous claim 55, wherein the intermediate layer is strength and seal welded with the stainless steel outer layer of the bimetallic tubes, and the anticorrosive lining is seal welded with the internal lining layer of the bimetallic tubes.

Claim 57 (New): The apparatus according to claim 42, wherein each tube of the tube bundle entirely includes a metal selected from titanium, zirconium, or an alloy of one of them.

Claim 58 (New): The apparatus according to claim 57, wherein an average thickness of the tubes ranges from 3 to 5 mm.

Claim 59 (New): The apparatus according to claim 57, wherein the three-layered wall comprising the at least three metallic layers constitutes at least the tube sheet plate delimiting the cavity in contact with the highly corrosive fluid.

Claim 60 (New): The apparatus according to the previous claim 59, wherein, in the plate, the anticorrosive lining is strength and seal welded to each of the tubes and has a thickness ranging from 2 to 10 mm.

Claim 61 (New): The apparatus according to claim 57, further comprising a carbon steel layer inserted between the intermediate layer and the anticorrosive lining, the carbon steel layer having a thickness ranging from 2 to 10 mm.

Claim 62 (New): Use of the apparatus according to claim 42 in a plant for synthesis of urea.

Claim 63 (New): The use according to the claim 63, as stripper in a high pressure synthesis cycle.

Claim 64 (New): A method for manufacturing a tube bundle apparatus according to claim 42, comprising:

constructing a hollow body equipped with an external casing, or pressure-resistant body, configured to tolerate operating pressures and including a material subject to corrosion by contact with the highly aggressive fluid;

forming, inside the hollow body, at least two cavities separated from each other by a third sealed cavity with respect to the at least two cavities, by interpositioning at least two plates, or septa, hinged to the pressure-resistant body, on which, to put the cavities in communication with each other, a series of tubes is inserted, forming a tube bundle, whose internal wall includes a material selected from titanium, zirconium, or an alloy of one of these, highly resistant to corrosion, so that during use, the internal wall of the tubes and a wall of at least one of the two cavities is in contact with the highly aggressive fluid;

wherein the wall that delimits at least one of the cavities is at least partly produced by superimposing three metallic layers in order including:

an external layer configured to tolerate a predetermined pressure load, subject to corrosion by contact with the highly aggressive process fluid;

a stainless steel intermediate layer; and

an anticorrosive lining situated on the internal surface in contact, during use, with the highly corrosive fluid, including a material selected from titanium, zirconium, or an alloy of one of these.

Claim 65 (New): The manufacturing method according to claim 64, wherein the wall of the cavity in contact with the highly aggressive fluid is entirely produced by superimposing the external layer, the intermediate layer, and the anticorrosive lining.

Claim 66 (New): The manufacturing method according to claim 64, wherein the anticorrosive lining includes zirconium.

Claim 67 (New): The manufacturing method according to claim 64, wherein the cavity delimited by a three-layered wall forms a lower chamber of a stripper.

Claim 68 (New): The manufacturing method according to claim 64, wherein the anticorrosive lining is deposited in close contact with the intermediate layer by a thermal spray technique.

Claim 69 (New): The manufacturing method according to claim 68, wherein the thermal spray technique is used in an area of the tube sheet plate.

Claim 70 (New): The manufacturing method according to claim 68, wherein the thermal spray technique is a spray arc technique.

Claim 71 (New): The manufacturing method according to claim 68, wherein before application of the anticorrosive lining, a surface of the intermediate layer is subjected to a cleaning.

Claim 72 (New): The manufacturing method according to claim 64, wherein the anticorrosive lining has a thickness ranging from 0.5 to 10 mm.

Claim 73 (New): The manufacturing method according to claim 64, wherein the wall made by the three superimposed metallic layers constitutes the plate wherein the tube bundle is inserted.

Claim 74 (New): The manufacturing method according to claim 64, wherein the tube bundle is formed by bimetallic tubes, each comprising a stainless steel outer layer and an internal lining layer, in contact with the corrosive fluid, including a material selected from titanium, zirconium, or an alloy of one of them.

Claim 75 (New): The manufacturing method according to claim 73, wherein the intermediate layer is strength and seal welded with the stainless steel outer layer of the bimetallic tube, and the anticorrosive lining is seal welded with the internal lining layer of the bimetallic tube.

Claim 76 (New): The manufacturing method according to claim 64, wherein the tube bundle is formed by tubes entirely made of a metal selected from titanium, zirconium, and an alloy thereof.

Claim 77 (New): The manufacturing method according to claim 76, wherein, in the plate, the anticorrosive lining is strength welded with each tube of the tube bundle.

Claim 78 (New): The manufacturing method according to claim 76, further comprising a carbon steel layer placed onto the intermediate layer, and wherein the anticorrosive lining, having a thickness of from 2 to 10 mm, is explosive cladded onto the carbon steel layer.

Claim 79 (New): A modification method of pre-existing equipment to obtain an apparatus according to claim 42, the apparatus being a tube bundle pressure apparatus comprising bimetallic tubes made of stainless steel internally lined with a metal selected from zirconium, titanium, or an alloy of the metals, wherein at least a part of a surface in contact with the process fluid is subject to strong corrosive attacks, comprising:

applying an internal lining close to and above areas effectively or potentially exposed to corrosion or on a whole cavity or part of the apparatus exposed to risk of corrosion, with necessary metallic layers obtaining a three-layered structure including:

an external layer configured to tolerate a predetermined pressure load, subject to corrosion by contact with the highly aggressive process fluid;

a stainless steel intermediate layer, strength and seal welded with the stainless steel inlet of each of the bimetallic tubes forming the tube bundle;

an anticorrosive lining situated on the internal surface in contact, during use, with the highly corrosive fluid, including a material selected from titanium, zirconium, or an alloy of one of these, seal welded with the internal lining of each of the bimetallic tubes.

Claim 80 (New): The modification method according to claim 79, for repairing or revamping pre-existing equipment.

Claim 81 (New): The modification method according to claim 79, effected during an ordinary maintenance intervention.

Claim 82 (New): The modification method according to claim 79, comprising cleaning a whole surface of the cavity and subsequent affixing, on the stainless steel layer, a layer of zirconium having a thickness from 0.5 to 3 mm seal welded with the lining of each bimetallic tube.